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## FIXED AMOUNT SALES SYSTEM

### BACKGROUND OF THE INVENTION

This application claims benefit of Japanese Patent Application No. 2002-227287 filed on August 5, 2002, the contents of which are incorporated by the reference.

The present invention relates to fixed amount sales systems and, more particularly, to a fixed amount sales system, which permits a customer in a gasoline stand or like shop to receive fuel supply or like service by specifying an amount of money.

A customer who wants to receive an fuel supply service in a gasoline stand or like shop, goes to the shop by driving his or her car. For the fuel supply in the shop, the fuel supply equipment is operated by a shop staff or by the customer himself or herself as self-service. At this time, in order to avoid payment and change return of small amounts of money and thus increase the process speed for both the customer and the shop, a fixed amount fuel supply service is provided.

Specifically, the customer preliminarily specifies a fixed amount of money, for instance 2,000 Yen, and then receives an fuel supply service corresponding to this amount. In this way, only payment of the constant amount (i.e., 2,000 yen in this case) is made between the customer and the shop, and no small amount of money is given or taken. Thus, it is possible to increase the process speed, which is a great merit for both the customer and the shop.

Among the prior art techniques in this technical field are, for instance, "Display Device" disclosed in Japanese Patent Laid-Open No. 2000-211697, "Sales Data Processing System"

disclosed in Japanese Patent Laid-Open No. 5-35972, "POS System" disclosed in Japanese Patent Laid-Open No. 8-119396, "Fuel Service Station" disclosed in Japanese Patent Laid-Open No. 8-194864, "Fuel Supply System," disclosed in Japanese Patent Laid-Open No. 10-167395 and "Item Sales Apparatus" disclosed in Japanese Patent Laid-Open No. 10-324398.

In gasoline stands or like shops, however, it is ready to provide not only gasoline but also many, relatively inexpensive option items (i.e., TBA items) that may be required by drivers, such as soft drinks, snack cakes, tobacco and chewing gum. To buy such items, the customer has to prepare changes for payment. No prior art technique shows a means for solving such problem. Therefore, the merits of the fixed amount fuel supply service can not be utilized, which is inconvenient for both the customer and the shop.

#### SUMMARY OF THE INVENTION

The present invention was made in view of the problems inherent in the prior art techniques and it has an object of providing a fixed amount sales system capable of fixed amount sales inclusive of amounts of option items.

According to an aspect of the present invention, there is provided a fixed amount sales system comprising a POS terminal for selling items present in a shop by weighing at a fixed amount as desired by a customer, wherein: the items corresponding to a balance amount as a difference of an amount of option items to be bought by the customer among the option items present in the shop from the fixed amount.

In the POS terminal a plurality of fixed amounts are

displayed for selection by the customer. Option items which can be bought in the selected fixed amount are displayed on a display unit in the POS terminal. A plurality of option items can be selected within the selected fixed amount. The POS  
5 terminal issues an option item ticket for the option items selected by the customer together with a sales receipt. The option item ticket has a print of a bar code. The shop is a gasoline stand.

Other objects and features will be clarified from the  
10 following description with reference to attached drawings.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a schematic of the system of a preferred embodiment of the fixed amount sales system according to the present invention; and

15 Fig. 2 shows display menus on the display unit 22 of the POS terminal 20, a flow chart of customers operations and shop staff's operations.

#### PREFERRED EMBODIMENTS OF THE INVENTION

Preferred embodiments of the present invention will now  
20 be described with reference to the drawings.

Fig. 1 is a schematic of the system of a preferred embodiment of the fixed amount sales system according to the present invention. This fixed amount sales system 10 comprises a POS (point of sales) terminal 20 and an external unit 30 connected  
25 thereto via a cable 40. The POS terminal 20 includes a keyboard 21 as input means for inputting amounts of money and so forth, a display unit 22, for instance liquid crystal display panel, for displaying inputted data or the like, and a bar code reader

23. The external unit 30 is, for instance, a well-known gasoline feeder.

A series of "sales process" operations as operations of the fixed amount sales system shown in Fig. 1 according to the present invention, will now be described with reference to Fig. 2. In Fig. 2, display menus on the display unit 22 of the POS terminal 20 are shown on left part, a flow chart of customers operations is shown in central part, and shop staff's operations are shown on right part. For the sake of the brevity, the illustrated operation routine concerns an example, in which a customer buys (obtains) regular gasoline supply and also juices and tobacco packs with a fixed amount of 2,000 yen.

First, the shop staff confirms the customer's desire, that is, "fixed amount fuel supply section" as to whether the customer desires fixed amount fuel supply is made (step S1). When the fixed amount fuel supply is selected, the shop staff specifies fixed amount fuel supply by operating the keyboard 21 in the POS terminal 20 or touching "fixed amount fuel supply" displayed on a menu shown in (A) in Fig. 2 with a finger or the like.

Then, the amount is specified (step S2). With the selection of the fixed amount fuel supply in the above step S1, a menu as shown in (B) in Fig. 2 is displayed. Specifically, a plurality of "amounts of money", e.g., 1,000 yen, 2,000 yen and 3,000 yen, and also "option" and "settlement" buttons are displayed. At this instant, the 2,000 yen button is selected. Preferably, the selected amount of money is made clear by enclosing the selected amount, i.e., 2,000 yen, in a bold frame

or displaying the sole selected amount (i.e., erasing the non-selected amounts). The "option" button is not reacted until selective operation of an "amount of money" button is made.

Then, when the customer desires the "option", he or she  
5 selects the "option" by touching the "option" button on the menu shown in (C) in Fig. 2 (step S3). When the "option" is selected, an "item display" menu as shown in (D) in Fig. 2 is provided, in which items which can be bought within the specified amount of money are displayed (step S4). In this example, item  
10 names and amounts of money, such as "Juice 120", "Juice 140", "Tobacco 250", "Tobacco 260", "Tobacco 280", "Chewing gam 100", "Cake 100" and "Cake 200", are displayed.

The customer then makes "item selection" of one or more items displayed on the menu (step S5). In this example, the  
15 customer specifies "Tobacco 260". Then, a check is made as to whether the total amount is within the previously selected fixed amount (i.e., 2,000 yen in this example) (step S6). When the total amount is within the fixed amount, the routine goes back to the step S5. In this step S5, it may be possible to also  
20 select a different item.

When the selection of the desired option items has been completed, the "settlement" button is touched (step S6). Until the touching of the "settlement" button, items which can be bought within the difference of the amount of the added TBA  
25 items from the fixed amount (of 2,000 yen), are held displayed on the menu. The customer thus additionally buys "Juice 120".

Then, a balance corresponding to the difference of the option item amount from the fixed amount (i.e., 2,000 yen) is

displayed on a menu shown in (E) in Fig. 2, and the fixed amount fuel supply process is executed (step S7). When the fuel supply is ended (step S8), as shown in (F) in Fig. 2, a "sales receipt" with corrective amount data of the fuel supply and the option  
5 items and also an "option item ticket" are printed and issued from the POS terminal 20 (step S9). This "option item ticket" has an impression of a "bar code".

The customer enters the shop with a carried slip with an option item bar code printed thereon. The customer then  
10 receives items in exchange with the slip with the option item bar code printed thereon from the shop staff. The shop staff sets the received slip in the bar code reader 23 for reading the data (step S10). In the above way, the sales process is completed (step S11).

15 While the above embodiment has been described in connection with the gasoline stand fuel supply example, this is by no means limitative, and the present invention is applicable as well to all items capable of being sold by weighing, such as kerosene for petroleum stove or the like, soy sauce and rice,  
20 and also related option items.

As has been described in the foregoing, with the fixed amount sales system according to the present invention the following pronounced practical effects are obtainable. In the first place, since the cash exchanged in the sales is the sole  
25 fixed amount (of 2,000 yen, for instance) inclusive of option item amounts, the customer need not make a time-consuming plurality of payments when obtaining fuel supply and option items (or TBA items).

Secondly, since no change is exchanged in option item sales in the shop, it is possible to greatly reduce the changes prepared on the shop side and thus greatly improve the operation efficiency.

5        Changes in construction will occur to those skilled in the art and various apparently different modifications and embodiments may be made without departing from the scope of the present invention. The matter set forth in the foregoing description and accompanying drawings is offered by way of  
10 illustration only. It is therefore intended that the foregoing description be regarded as illustrative rather than limiting.